

IN THE CLAIMS

1-14. (Cancelled).

15. (New) An electron-emitting device comprising:
a first electrically conductive film;
a second electrically conductive film; and
a carbon film for emitting electrons disposed to cover a part of said first electrically conductive film,
wherein when an electrically conductive probe of an Atomic Force Microscope contacts a portion of said carbon film positioned over said first electrically conductive film, a resistivity of said carbon film measured in a direction from said probe toward said first electrically conductive film is not larger than 0.001 Ωm .

16. (New) The device according to claim 15, wherein said carbon film has an amorphous structure or a graphite structure.

17. (New) The device according to claim 15, wherein said carbon film has a gap at a part thereof, said first electrically conductive film is connected to a first end of said carbon film, and said second electrically conductive film is connected to a second end of said carbon film.

18. (New) The device according to claim 17, wherein the first end of said carbon film is connected through said first electrically conductive film to a first electrode, and the second end of said carbon film is connected through said second electrically conductive film to a second electrode.

19. (New) The device according to claim 18, wherein the gap is disposed between said first and second electrically conductive films, said carbon film is disposed between said first and second electrically conductive films and on said first and second electrically conductive films.

20. (New) The device according to claim 15, wherein said first and second electrically conductive films have a resistance of 1×10^2 to $1 \times 10^7 \Omega/\square$.

21. (New) The device according to claim 18, wherein a material of said first and second electrodes includes Pt.

22. (New) An electron source comprising a plurality of electron-emitting devices, wherein each electron-emitting device is an electron-emitting device according to claim 15.

23. (New) An image forming apparatus comprising an electron source and an image forming member, wherein said electron source is an electron source according to claim 22.